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DARBY & DARBY P.C.
P.O. BOX 770
Church Street Station
New York, NY 10008-0770

EXAMINER	
DEODHAR, OMKAR A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/502,462	YAMAGUCHI, TAKASHI	
	Examiner	Art Unit	
	OMKAR A. DEODHAR	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-10 and 16-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-10,16-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Non-Final Rejection

Response to Arguments & Amendment

Applicant has amended independent claims 1/16 & added new claims 17/18. The claim amendments & new claims are directed towards an accessory device generating data to control each controller. The generated data is for "independently altering the implementation of one of the various controls by the plurality of controllers." Based on Applicant's Specification (for example at Page 35, Lines 26-27 and Page 36, Lines 1-24) and Applicant's arguments, Examiner understands the claim amendments & new claims to require that the accessory device forces restrictions upon, or precludes user controllers from transmitting certain automobile control data based on travel conditions, (i.e., velocity, fuel shortage, tire limit).

Examiner concurs that the prior art relied upon does not teach an accessory device able to preclude data transmissions or certain controls from the controller to the automobile devices.

However, in a related model train control system, Katzer (U.S. 6,270,040) teaches a software system that issues a stop command to a train if a collision is imminent. See Col. 45. Lines 47-57. While the software system does not preclude a user from transmitting control information via a controller, it alters the implementation of a control by simply sending a stop command to a moving train.

Examiner interprets likelihood of collision a travel condition just as velocity & tire limits are travel conditions in Applicant's invention.

Based on Examiner's understanding of a model train system, whether a controller is prevented from transmitting data that would likely result in a collision on the track or whether a software system overrides the control data to issue a stop command directly to the train, the same purpose is achieved.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to incorporate Katzer's stop command for avoiding collisions into the model train system taught by Wolf & DeAngelis. This is considered a substitution of known elements with the predictable results of avoiding train collisions on a model track. Further note that Wolf & DeAngelis, as presented below with respect to claim 1, teaches multiple sets of models and controllers.

This rationale has been applied in the rejection below with respect to claim 1, 16 & newly added claims 17/18.

The remainder of Applicant's arguments is moot in view of the new ground(s) of rejections.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4-7, 10 & 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf et al., USPAT 6,457,681 (Wolf) in view of DeAngelis et al., USPAT 6,247,994 (DeAngelis), in yet further view of Katzer USPAT 6,270,040.

As to claims 1, 17 & 18, Wolf presents a control and operating system for model trains and discloses (column 5, lines 11-13), "The present invention provides a control system that allows the user to operate multiple trains on the same track and under independent operating instructions." Wolf further discloses, (column 2, line 60 - column 3, line 6), "One feature of the present invention is a novel two-way remote control communication capability between the user and the model trains. This feature is accomplished by using a handheld remote control on which various commands may be entered, and a Track Interface Unit that retrieves and processes the commands. The Track Interface Unit converts the commands to modulated signals (preferably spread spectrum signals) which are sent down the track rails. The model train picks up the modulated signals, retrieves the entered command, and executes it through use of a processor and associated control and driver circuitry. The process may also be reversed, so that operating information regarding the train is provided back to the user for display on the remote control." Wolf further discloses (column 7, line 25 - column 8, line 63), "It should be understood that other processors or hard-wired circuitry could be used. The remote control...also has a wireless transmitter, such as the illustrated RF transceiver...and antenna...The

processor...in the remote control...monitors the inputs from the user and from the RF antenna...for any changes and updates the display accordingly...The TIU...has a transceiver...that communicates with the transceiver...and antenna...located in the remote control...The model train...has a printed circuit board...installed inside...The printed circuit board...has a processor...at the center of the model train's operations. The processor...is connected to a receiver circuit...that picks the spread spectrum signals off from the train track rails in the preferred embodiment. The receiver circuit...passes the spread spectrum signals to a communication circuit...The communication circuit...in one embodiment, correlates the spread spectrum signals into a fixed data pattern that is capable of being recognized by the processor...The processor...upon receiving the data pattern containing the command, outputs an acknowledge signal to the communication circuit...The communication circuit...converts the acknowledge signal to spread spectrum format and outputs the acknowledge spread spectrum signal to a transmitter circuit...Alternatively, the processor...outputs an acknowledge signal in spread spectrum format itself directly to the transmitter circuit...In either embodiment, the transmitter circuit...places the acknowledge spread spectrum signal on the train track rails, where it is picked up by the TIU...The TIU processor...then converts the acknowledge spread spectrum signal into an RF signal, which the TIU transceiver...outputs to the remote control...In this way, there is "handshake" capability between the TIU...model train printed circuit board...and remote control...The reason for such bidirectional capability is

that it allows the data about the model train...to be received by the user." Wolf further discloses (column 40, lines 1-31), "Another aspect of the present invention is the "record mode" for recording a list of commands inputted on the remote control...to be played back at a later time. A user can push a designated push-button...on the remote control...to initiate "record mode". Thereafter, the user can input any command (including actuation of any accessories) to drive the track layout...Each command inputted in the remote control...will be stored in the flash memory...of the TIU...(or alternatively, the commands can be stored in the flash memory...of the remote control). When the user has finished his/her desired chronology of commands, the user will then push the appropriate push-button...to "stop recording". The user can then name the file and save it in a fashion similar to saving file names with respect to the accessories discussed above. Accordingly, the user will be able to "play-back" the commands at any time in the future by simply activating the stored file. This is done by scrolling through the remote control...using the thumb-wheel...and finding the file identified by the name given to it (e.g., "My favorite commands"). By activating the desired file name, the remote control...will then send the appropriate RF signal to the TIU...which will retrieve from its flash memory...the desired file and will automatically play back the list of commands as they were saved! This would meet the applicant's limitation of having a controller and a model controlled based on data transmitted from the controller, the transmitted data corresponding to an operation of the controller. The TIU corresponds the accessory device,

which as per the applicant's limitation is provided separately from the controllers and the models, for conducting data communication with the controller and the model. Wolf's invention further meets the applicant's limitation of having a radio communication module for executing for executing the data communication and for conducting bilateral data communication and a control device for implementing various controls based on data communication conducted through the radio communication module. Wolf would also render the applicant's new limitation of the accessory device comprising: an information input section for accepting a user's information input (Wolf's TIU); a device for executing a predetermined procedure based on information input from the information input section (Wolf's programmable TIU, discussed above and in Wolf, column 40); and a device for generating data corresponding to a result of the procedure and sending the data through the radio communication module (Wolf's controller executing command and sending it via RF signal) as being obvious. Although Wolf discloses that this invention can control multiple models, Wolf fails to disclose a plurality of sets including a controller and a model.

DeAngelis presents a system and method for communicating with and controlling toy accessories and discloses (abstract), "A system and method for controlling toy vehicles has a plurality of pads coupled to a central station. Switches in the pads may be closed to select toy vehicles and the operation of motors for moving the vehicles forwardly, rearwardly, to the left and to the right and moving upwardly and downwardly a receptacle or bin for holding

transportable elements...The pads are connected by wires to the central station, and may be interrogated selectively, sequentially or simultaneously by the central station. The central station forms packets of signals representative of the switch closures of the interrogated pads, and transmits the packets over a modulated carrier frequency to receivers in the vehicles...When the pads are interrogated by the central station, the signals from the pads are routed to the accessory or second central station. If the accessory is a smart accessory, the signals are processed by the smart accessory and then sent back to the first central station for transmission to the vehicles." DeAngelis further discloses (column 4, lines 2-4) that, "The central station receives the signals from the pad, and forms packets of data to be transmitted over radio frequencies to receivers in the toy vehicles."

The advantage of having multiple sets of models and controllers DeAngelis writes (column 1, lines 40-43) is that, "There is also a desirability, and even a need for play systems in which a plurality of vehicles can be remotely controlled by switches in hand-held pads to compete against one another..."

This is evidence that one of ordinary skill in the art would have reason/motivation/suggestion to have a remote control toy system with a plurality of controller and model sets for the purpose of letting users of the sets compete against one another.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the plurality of models and control sets

as described by DeAngelis in the invention of Wolf for the purpose of allowing users of the sets to compete against one another.

DeAngelis in view of Wolf does not teach an accessory device for independently altering the implementation of one of the various controls by the plurality of controllers. DeAngelis in view of Wolf does not teach precluding data transmissions or certain controls from the controller to the automobile devices.

However, in a related model train control system, Katzer (U.S. 6,270,040) teaches a software system that issues a stop command to a train if a collision is imminent. See Col. 45. Lines 47-57. While the software system does not preclude a user from transmitting control information via a controller, it alters the implementation of a control by simply sending a stop command to a moving train. Examiner interprets likelihood of collision a travel condition just as velocity & tire limits are travel conditions in Applicant's invention.

Based on Examiner's understanding of a model train system, whether a controller is prevented from transmitting data that would likely result in a collision on the track or whether a software system overrides the control data to issue a stop command directly to the train, the same purpose is achieved.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to incorporate Katzer's stop command for avoiding collisions into the model train system taught by Wolf & DeAngelis. This is considered a substitution of known elements with the predictable results of avoiding train collisions on a model track.

As to claim 2, Wolf discloses (column 7, lines 32 - column 8, line 10) that, "...the remote control...communicates with the TIU...When the remote control processor...is required to send a command to the TIU...it does so through the RF transceiver...In one embodiment, the RF transceiver...operates in approximately the 900 MHz band using "ook" (on/off keying) modulation, although it would be recognized by those of skill in the art that other methods of communication could be used. The processor...via the transceiver...sends an RF signal that contains the command entered by the user...The TIU...has a transceiver...that communicates with the transceiver...and antenna...located in the remote control...Thus, in one embodiment the transceiver...is a 900 MHz band 9600 baud ook transceiver, although it should be understood that other transceiver configurations could be used. Further, an IR receiver could be used if the remote control...is transmitting IR signals, or any other wireless transceiver may also be acceptable depending on the wireless communication scheme implemented by the manufacturer. The transceiver...receives the RF signal containing the command issued from the remote control...The transceiver...passes the RF signal to a processor...that controls the TIU...The processor...decodes the command from the RF signal and issues an "acknowledgment packet" to the transceiver...for communication back to the remote control...The acknowledgment packet is used to inform the remote control...that the command was successfully received by the TIU...The processor...in the TIU...extracts the command from the RF signal and passes it to the communication circuit...for

conversion into spread spectrum format...The communication circuit...then passes the spread spectrum signal to a transmitter...for outputting the spread spectrum signal..." This would meet the applicant's limitation of having a control device for the accessory device (TIU) which comprises a device for receiving data (transceiver in TIU) sent from the controller, a device for executing procedure (processor), and a device for generating data corresponding to the procedure and sending the data through a communication module (transceiver in TIU). This would also meet the applicant's limitation wherein the accessory device (TIU) contains an information input section for accepting input from the controller (transceiver in TIU) and the control device of the accessory device comprises a device for executing a predetermined procedure (processor) based on information input from the information input section, and a device for generating data corresponding to a result of the procedure and sending the data through the radio communication module (transceiver).

As to claims 4 and 5, Wolf discloses (column 7, lines 16-23), "...the remote control...has an LCD display...a thumb-wheel...and various push buttons...The user enters commands by pressing a particular push-button...(or a predetermined series of push-buttons...) dedicated to a particular command, or by using the thumb-wheel...to scroll through a menu that appears on the LCD display...to select the desired command. The remote control...is preferably battery operated and is controlled by a processor..." As discussed above, the remote control has a transceiver and antenna. The TIU also has a transceiver

that communicates with the transceiver and antenna located in the remote control. The system has a 'handshake' capability between the TIU, model, and remote control that allows data about the model train to be received by the user. This would meet the applicant's limitation of the control device of the controller comprised of a device for receiving the data sent from the accessory device (transceiver in remote control) and a device for executing a predetermined procedure based on the received data (processor in remote control). This would also meet the applicant's limitation of having a toy system wherein the sending device (transceiver in TIU) of the control device of the accessory device is configured to generate and send broadcast data for controllers, and the receiving device of the control device of the controller (transceiver in remote control) is configured to receive the broadcast data, and the executing device (processor in controller) of the control device of the controller is configured to execute a predetermined procedure. While Wolf does not explicitly disclose that this can be done for a variety of controllers, it would have however been a matter of choice, well within the capabilities of one skilled in the art to configure this system for broadcasting to multiple controllers, as this would merely involve varying an identity code or frequency associated with each controller when multiple controllers are used.

As to claims 6 and 7, as discussed above, the model has a receiver with a processor connected to it. This would meet the applicant's limitation of having a control device of the model comprised of a device for receiving the data

(receiver) sent from the accessory device (TIU) through the radio communication module (transceiver in TIU) and a device for executing a predetermined procedure based on the received data (processor in model train). As discussed above, Wolf discloses that this system can be used to control multiple trains. This would also meet the applicant's limitation of having a toy system wherein the sending device (transceiver) of the control device of the accessory device is configured to send broadcast data intended for a plurality of models, and the receiving device (receiving device in train) of the control device of each model is configured to receive the broadcast data, and the executing device (processor in train) of the control device in each model is configured to execute a predetermined procedure common to all the models for which the broadcast data is intended.

As to claim 10, as discussed above, Wolf discloses that either and IR or RF signal may be used as a means of communication in his invention. As Bluetooth is a radio frequency (RF) communications standard, this would meet the applicant's limitation of having a toy system, wherein the radio communication module is based on Bluetooth standards.

As to claim 16, as discussed above, Wolf discloses a TIU (applicant's accessory device) which transmits data received from a remote control via RF or IR means to a model. Wolf further discloses (column 12, lines 29-46), "The communication circuits...in the TIU...and the engine board...of the model train...respectively are capable of both receiving and transmitting spread

spectrum signals in the above fashion. Therefore, once the processor...in the model train...determines what the command is, the processor...assembles an acknowledge packet, which is intended to provide the TIU... and the remote control...with an indication that the command has been received. The acknowledge packet is sent to the communication circuit...for conversion into spread spectrum format...This is then sent through the rails back to the TIU...where it is received and detected by the transceiver...and communication circuit...in the TIU...The acknowledge spread spectrum signal is decoded as explained above and the acknowledge signal is passed to the TIU processor...In this manner, all components of the model train system are aware of the operating conditions of the model train at all times." This would meet the applicant's limitation of an accessory device used in combination with a controller and a model remotely controlled based on data transmitted from the controller, the accessory device comprised of a radio communication module, the module serving as a device for executing bilateral data communication between the accessory device and the controller and between the accessory device and the model, with a control device (processor in TIU) for implementing various controls based on data communication conducted through the radio communication module, where the control device comprises: a device for receiving data (transceiver in TIU), a device for executing a procedure (processor in TIU) based on information in the received data, and a device for generating data corresponding to a result of the procedure (transceiver in TIU) and sending it

through the radio communication module. As discussed above, Bluetooth is a radio frequency (RF) communications standard, and since Wolf lists RF and IR wireless communication means, radio communication based on Bluetooth would be obvious by these means. The additional limitation of an information input section for accepting information input from the controller (transceiver in TIU), wherein the control device comprises a device for executing a procedure (processor in TIU) based on information input from the information input section, and a device for generating data corresponding to a result of the procedure and sending the data (transceiver in TIU) through the radio communication module, also discussed above, would have been met and made obvious by Wolf's invention. As previously discussed above, Wolf would also make the applicant's amended claim of 'accepting a user's information input' as being obvious vis-a-vis the programmable controller and TIU as discussed in the Wolf reference (Wolf, column 40). Please see the discussion of the Katzer Patent in claim 1, above.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf in view of DeAngelis, in further view of Katzer, and yet in further view of Smith et al., USPAT 6,109,186 (Smith).

As to claims 8 and 9, the applicant's limitation of having a model with a detection device for outputting a signal correlated to a play situation of the system, where a device effects a decision based on the signal of the detection device, and a device for generating data corresponding to a result of the decision, and sending data through the radio communication module, where the

control device of the accessory device comprises: a device for receiving data sent from the module, and a device for receiving data on the controller have all be discussed above, and would have been made obvious by Wolf. Wolf however fails to explicitly disclose a device for determining restrictions, a device for generating data corresponding to the determined restriction, and the control device of the controller or model comprises: a device for receiving data corresponding to the restrictions, and a device for setting a corresponding relationship between the operation of the controller and the action of the model based on the receiving data.

Smith presents an interactive slot car system and discloses (abstract), "The game has an intermediate control device which limits the control that the user has over the speed of the slot car, and can be programmed to simulate occurrences such as tire wear or fuel shortages. The intermediate control device limits car speed due to actual occurrences during racing, such as a car in another lane exiting the track, thereby creating and enforcing caution periods, as in auto racing." Smith further discloses (column 2, lines 20-38), "The invention may use rheostat controllers commonly available, while providing an interactive intermediate control device, such as a microprocessor as disclosed herein, to interpret a supplied lower voltage from the controller to the processor, and command a corresponding higher voltage to the track. The intermediate control device maintains direct control of the vehicles, and modifies control when instructed by the control program, in response to programmed track events such

as practice, qualification, and race conditions, or sensed events like starts, cautions, pits, re-starts, and victory. The intermediate control device also provides means for detecting the status of track activities, by the use of a novel comparator system which detects low voltage. When voltage in a lane drops to zero, as compared to the commanded input voltage, a departure of a car from the track, or a "crash," is interpreted. In response, the intermediate control device slows, or otherwise modifies, the available voltage to the other lanes, thereby slowing the cars to simulate a "caution" condition, as in real racing." This would meet the applicant's limitation of a device for determining restrictions concerning an action of at least one model based on the received data (Smith's intermediate control device slowing cars when one car leaves the track) and a device for setting a corresponding relationship between the operation of the controller and the action of the model based on the received data (intermediate control device governs voltage applied to track regardless of voltage provided by the rheostat controllers). This would further meet the applicant's limitation wherein the device for setting a corresponding relationship between the operation of the controller (intermediate control device in Smith) and the action of the model changes a corresponding relationship between a quantity of an operation of the controller (i.e. voltage provided from the controller to the track in Smith) concerning specific action of the model and a quantity of control (voltage provided) according to the restrictions.

The advantage of providing these restrictions, Smith writes (column 1, lines 51-62) is that prior art racing systems, "falls short of providing an accurate simulation of today's real motor sporting events. Prior art simulations use rheostat hand controllers to directly vary the voltage to the track and these systems have no means of indirect control in response to specific track events. Power to the vehicles is either on or off, with no reduction steps available for forcing players to slow their cars for running starts, simulated malfunctions, fuel shortages, or caution periods. The prior art devices do not have means to detect vehicle crashes, nor means for realistically enunciating such events."

This is evidence that one of ordinary skill in the art would have reason/suggestion/motivation to use the intermediate control device which limits speed in certain situations for the purpose of adding more realism to a game.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the toy control system as proposed by Wolf in view of DeAngelis in further view of Katzer, with the intermediate control device which limits speed in certain situations as described by Smith for the purpose of adding more realism to a game.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMKAR A. DEODHAR whose telephone number is (571)272-1647. The examiner can normally be reached on M-F: 8AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/OAD/

/Corbett Coburn/
Primary Examiner
AU 3714